Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): A remaining film thickness determining method employed in a polishing process, comprising:

a measuring process including,

a first step of forming a predetermined coated film on a semiconductor substrate;

a second step of forming on the coated film resist patterns each having a plurality of ~~line/space~~ pattern blocks including lines and spaces in which at least one of line widths and space widths are different from one another;

a third step of etching ~~the surfaces~~ a surface of the coated film and the semiconductor substrate with the resist patterns as masks to thereby form trenches;

a fourth step [[for]] of removing the resist patterns and thereafter forming a buried insulating film which charges [[the]] interiors of the trenches and covers the surface of the coated film;

a fifth step of polishing [[the]] a surface of the buried insulating film so as to expose the surface of the coated film; and

a sixth step of measuring remaining film thicknesses of the coated film

subsequent to said fifth step, at a plurality of measuring points; and

a computing process including,

a seventh step of conceptually defining ~~each of~~ reference regions each

having a predetermined shape and area in [[the]] a surface of the semiconductor

substrate, such that each of the measuring points is respectively placed in a

[[the]] center of a corresponding one of the reference regions ~~thereof~~;

an eighth step of computing for each of the reference regions a ratio

between an area of [[the]] a corresponding reference region and a gross area of

the lines lying in the corresponding reference region;

a ninth step of determining a relationship between a result of

measurement in said sixth step and a result of computation in said eighth step;

and

a tenth step of determining an anticipated remaining film thickness of the

coated film at an arbitrary point of an actually fabricated semiconductor device

based on ~~the basis of~~ the relationship determined in said ninth step.

Claim 2 (Original): The remaining film thickness determining method according to claim

1, wherein the coated film is a laminated film having a protective oxide film formed on

the semiconductor substrate and a silicon nitride film formed on the protective oxide

film.

Claim 3 (Currently Amended): The remaining film thickness determining method according to claim 1, wherein said fifth step ~~the polishing process~~ is a chemical mechanical polishing process.

Claim 4 (Currently Amended): The remaining film thickness determining method according to claim 1, wherein the reference regions are defined so as to straddle the plurality of ~~line/space~~ pattern blocks including the lines and the spaces.

Claim 5 (Currently Amended): The remaining film thickness determining method according to claim ~~claims~~ 1, wherein the gross area of the lines is calculated after the line widths are corrected so as to approximate convex pattern widths of the buried insulating film formed in said fourth step, and the computation of said eighth step is performed using [[the]] a result of the calculation.

Claim 6 (Currently Amended): A remaining film thickness determining method employed in a polishing process, comprising:

a measuring process including,

forming a predetermined coated film on a semiconductor substrate;

forming on the coated film resist patterns each having a plurality of ~~line/space~~ pattern blocks including lines and spaces in which at least one of line widths and space widths are different from one another;

etching a surface the surfaces of the coated film and the semiconductor

substrate with the resist patterns as masks to thereby form trenches;

removing the resist patterns and thereafter forming a buried insulating film

which charges [[the]] interiors of the trenches and covers the surface of the coated film;

polishing [[the]] a surface of the buried insulating film so as to expose the

surface of the coated film; and

measuring remaining film thicknesses of the coated film subsequent to

said polishing process, at a plurality of measuring points; and

a computing process including,

conceptually defining each of reference regions each having a

predetermined shape and area in [[the]] a surface of the semiconductor substrate, such

that each of the measuring points is respectively placed in a [[the]] center of a

corresponding one of the reference regions thereof;

an eighth step of computing for each of the reference regions a ratio

between an area of a corresponding [[the]] reference region and a gross area of the

lines lying in the corresponding reference region;

determining a relationship between a result of measurement in said

measuring remaining film thickesses measuring process and a result of computation in

said ratio computing process; and

determining an anticipated remaining film thickness of the coated film at

an arbitrary point of an actually fabricated semiconductor device based on the basis of

the relationship determined in said determining a relationship determining process.

Claim 7 (Original): The remaining film thickness determining method according to claim 6, wherein the coated film is a laminated film having a protective oxide film formed on the semiconductor substrate and a silicon nitride film formed on the protective oxide film.

Claim 8 (Currently Amended): The remaining film thickness determining method according to claim 6, wherein [[the]] said polishing process is a chemical mechanical polishing process.

Claim 9 (Currently Amended): The remaining film thickness determining method according to claim 6, wherein the reference regions are defined so as to straddle the plurality of line/space pattern blocks including the lines and the spaces.

Claim 10 (Currently Amended): The remaining film thickness determining method according to claim claims 6, wherein the gross area of the lines is calculated after the line widths are corrected so as to approximate convex pattern widths of the buried insulating film formed in said removing the resist patterns removing process, and the computation of said ratio computing process is performed using [[the]] a result of the calculation.